dvipdfm*x*, an eXtension of dvipdfm

Jin-Hwan Cho

Korea Institute for Advanced Study

chofchof@ktug.or.kr

March 11, 2003

Abstract   In this presentation I would like to introduce a DVI to PDF translator, dvipdfm*x* (formerly dvipdfm-cjk), which is an extension of dvipdfm developed by Mark. A. Wicks.

People might ask why we consider a DVI to PDF translator at this moment, because we already have a powerful TEX software, pdfTEX, which generates a PDF result directly from TEX sources without using the DVI format. It is true for people using languages which make use of the Latin alphabet (or other 8-bit character set) that pdfTEX is sufficient.

However, the situation is quite different if we use Northeast Asian language (Chinese, Japanese and Korean; simply CJK) or Unicode using 16-bit characters. Actually the current version of pdfTEX has no ability to handle 16-bit characters. Even though a PDF viewer shows 16-bit characters in a PDF file generated by pdfTEX, the codes are not 16-bit but 8-bit. It means that extracting and searching those 16-bit characters are impossible. Furthermore, it is quite hard to generate a PDF file with pdfTEX having bookmarks or text annotations with 16-bit characters.

That is the main reason why I am going to introduce dvipdfm*x* at this moment. The DVI driver software, dvipdfm*x*, handles 16-bit character using CID-keyed font technology which is already included in the PDF specification. Therefore, dvipdfm*x* works well with almost all TEX variants including ASCII pTEX, the most popular TEX software in Japan, and Omega. In particular, it might be interesting to show the audience a PDF example containing 16-bit characters from dozens of different languages, which are extractable and searchable as a matter of course.

Recently there was a revolutionary progress in developing dvipdfm*x*, that was when dvipdfm*x* began to support ConTEXt. Many source codes of dvipdfm*x* were rewritten in this stage. At present dvipdfm*x* handles many ConTEXt documents containing complex MetaPost figures (color shading too) and interactive forms (JavaScript too). I would like to show those fantastic examples in the presentation.

There are also many features in dvipdfm*x* not mentioned above, PDF encryption for example. More information on dvipdfm*x* can be found in the project homepage from the following URL.

http://project.ktug.or.kr/dvipdfmx/

The dvipdfm*x* project is a combined work of the dvipdfm-jpn project by Shunsaku Hirata and its modified version, dvipdfm-kor, by Jin-Hwan Cho.